

2008

ECONOMICS

[Special Paper : *Econometrics-III*]

PAPER—XI

Full Marks : 40

Time : 2 hours

The figures in the right-hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

GROUP—A

1. Answer any *five* questions from the following: 2 × 5

(a) What is 'mongrel' equation?

(b) What are the rules for 'identification'?

(Turn Over)

- (c) Distinguish single equation method and systems method of estimation.
- (d) What are the prior information about structural parameters that are used for identification ?
- (e) What do you understand by Instrumental variable ?
- (f) What are the objectives of PCA ?
- (g) What is communality ?
- (h) What do you mean by non-spherical disturbance term ?
- (i) Define Seemingly Unrelated Regression (SURE) ?
- (j) What is feasible GLS ?

GROUP—B

Answer any *two* questions

- 2. What are the tests for simultaneity and exogeneity? 5
- 3. Explain the FIML estimation in brief. 5

4. Explain dynamic econometric model with suitable example. 5
5. Explain the model for which the Generalised least squares. Estimation method is appropriate. 5

GROUP—C

Answer any *two* questions

6. What are the steps involved in 2SLS estimation? How can you get 2SLS estimates when the error terms are autoregressive? Prove that 2SLS estimator and IV estimator are the same if the equation is exactly identified. 3 + 2 + 5
7. Discuss the steps involved in PCA. 10
8. Derive the mathematical form of translog production function. Derive its structure and estimation procedure as SURE. 10
9. Prove that a GLS estimator is BLUE. 10